Geotechnical Testing Journal
Table of Contents
Volume 27, 2004

No. 1, January

Reduction of Boundary Friction in Model Tests—YUNG-SHOW FANG, TSANG-JIANG CHEN, ROBERT D. HOLTZ, AND WEI F. LEE 3

Digital Image Correlation to Evaluate Shear Banding in Dilative Sands—AMY L. RECHENMACHER AND RICHARD J. FINNO 13

Measurement of Quasi-Elastic Stiffness Parameters of Dense Toyoura Sand in Hollow Cylinder Apparatus and Triaxial Apparatus with Bender Elements—SUSHIL K. CHAUDHARY, JIRO KUWANO, AND YUTAKA HAYANO 23

Liquefaction Testing of Layered Sand-Gravel Composites—F. AMINI AND A. CHAKRAVRTY 36

Volume Change Measurement of Soil Specimen in Triaxial Test—E. C. LEONG, S. S. AGUS, AND H. RAHARDJO 47

Vane Shear Behavior of Soft Bangkok Clay—TIAN HO SEAH, NOTE SANGTIAN, AND IO CHONG CHAN 57

Experiments with a Miniature Piezocone in Thinly Layered Soil—CHARLES C. HIRD AND NOTE SANGTIAN 67

Effect of Pile Installation Method on Pipe Pile Behavior in Sands—KYUHO PAIK AND RODRIGO SALGADO 78

Self-Healing of Concentrated Leaks at Core-Filter Interfaces in Earth Dams—LAKSHMI N. REDDI AND SAI P. KAKUTURU 89

Evaluation of Woven Geotextile Pore Structure Parameters Using Image Analysis—AHMET H. AYDILEK AND TUNCER B. EDIL 99

Technical Note

Tensile Test Method Effect on the Tensile Strength of Flexible PET Geogrids—CHIWAN WAYNE HSIEH AND CHIEN-KUEI LIN 111

No. 2, March

Examination of Proof Test Extrapolation for Drilled Shafts—PHILLIP S. K. OOI, BRIAN K. F. CHANG, AND GERALD Y. SEKI 123

True Triaxial Testing System for Clay with Proportional-Integral-Differential (PID) Control—DOUGLAS MANDEVILLE AND DAYAKAR PENUMADU 134

A Flume for Assessing Flux Boundary Characteristics in Rainfall-Induced Slope Failure Studies—HARIANTO RAHARDJO, T. T. LEE, E. C. LEONG, AND R. B. REZAUR 145

Determination of the Soil Water Characteristic Curve of Highly Compressible Materials: Case Study of Pulp and Paper By-Product—ALEXANDRE R. CABRAL, LAURE PLANCHET, FERNANDO A. MARINHO, AND GUY LEFEBVRE 154

Leak-Free Pressure Plate Extractor for Measuring the Soil Water Characteristic Curve—XIAODONG WANG AND CRAIG H. BENSON 163

A Physical Model for Sloping Capillary Barriers—DENNY TAMI, HARIANTO RAHARDJO, ENG-CHOON LEONG, AND DELWYN G. FREDLUND 173

Determination of the Diffusion Coefficient of Oxygen for a Cover System Including a Pulp and Paper By-Product—A. R. CABRAL, P. TREMBLAY, AND G. LEFEBVRE 184

Measurement of Energy and Strength of Sand at Critical State—B. MUHUNTHAN, V. S. PILLAI, AND D. OLCOTT 198

Characterization of SASW Phase Angle and Phase Velocity Measurement Uncertainty—KAREN T. MAROSI AND DENNIS R. HILTUNEN 205

Characterization of a Fiberglass Geotextile for Unsaturated In-Plane Water Transport—JOHN C. STORMONT AND RACHELLE RAMOS 214

Free Swell Ratio and Clay Mineralogy of Fine-Grained Soils—K. PRAKASH AND A. SRIDHARAN 220

No. 3, May

Model Pile Pull-Out Tests Using Polyethylene Sheets to Reduce Downdrag on Cast In Situ Piles—S. H. CHOW AND K. S. WONG 230

Design of a Measurement Program for a Bench-Scale PVD Remediation System Using Bayesian Updating—ANDREA L. WELKER AND ROBERT B. GILBERT 239

Copyright © 2004 by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959.

Effects of Back Pressure and Strain Rate Used in Triaxial Testing of Stabilized Organic Soils and Clays—HELEN ÅHNBERG 250

Interaction Between Hexagonal Wire Reinforcement and Rubber Tire Chips with and without Sand Mixture—S. YOUWAI, D. T. BERGADO, AND N. SUPAWIWAT 260

Testing Rockfill Under Relative Humidity Control—L. A. OLDECOP AND E. E. ALONSO 269

Granular Pile Anchor Foundation (GPAF) System for Improving the Engineering Behavior of Expansive Clay Beds—B. R. PHANIKUMAR, RADHEY S. SHARMA, A. SRIRAMA RAO, AND M. R. MADHAV 279

Frequency Domain Determination of G_0 Using Bender Elements—PAUL D. GREENING AND DAVID F. T. NASH 288

Laboratory Tests on the Rate of Piping Erosion of Soils in Embankment Dams—CHI FAI WAN AND ROBIN FELL 295

Permeability Tests in Rigid-Wall Permeameters: Determining the Degree of Saturation, its Evolution, and its Influence on Test Results—ROBERT P. CHAPUIS 304

Use of "Zero Controlled Gradient" Tests to Determine EOP Compression Behavior—THOMAS C. SHEAHAN, DON J. DEGROOT, QINGWEI FU, AND ROBERT M. RYAN 314

Technical Note

A Modified Pressure Plate Apparatus—E. C. LEONG, S. TRIPATHY, AND H. RAHARDJO 322

No. 4, July

The Louisiana Plane Strain Apparatus for Soil Testing—KHALID A. ALSHIBLI, DAVID L. GODBOLD, AND KEITH HOFFMAN 337

A Soil Column Apparatus for Laboratory Infiltration Study—HONG YANG, HARIANTO RAHARDJO, BUDI WIBAWA, AND ENG-CHOON LEONG 347

A Direct Tensile Strength Testing Method for Unsaturated Geomaterials—H. NAHLAWI, S. CHAKRABARTI, AND J. KODIKARA 356

Collapse Behavior of Compacted Clays in Suction-Controlled Triaxial Tests—D. A. SUN, H. MATSUOKA, AND Y. F. XU 362

Effect of Compaction Conditions on the Seismic Compression of Compacted Fill Soils—DANIEL H. WHANG, JONATHAN P. STEWART, AND JONATHAN D. BRAY 371

Influence of Soaking on Stress-Strain Characteristics of Fly Ash—CHENG ZHOU, JIAN-HUA YIN, AND JING-PING MING 380

Development and Calibration of a Large-Scale Thermal Conductivity Probe—JAMES L. HANSON, STEFAN NEUHAEUSER, AND NAZLI YESILLER 393

Technical Notes

Effect of Leachate Composition on the Adsorption Properties of Two Soils—YAN JUN DU AND SHIGENORI HAYASHI 404

Measuring Soil Electrical Resistivity Using a Resistivity Box and a Resistivity Probe—S. SREEDEEP, A. C. RESHMA, AND D. N. SINGH 411

Discussion

Discussion of "A Comparative Study of Suction-Induced Seepage Consolidation Versus Centrifuge Consolidation" by R. G. Robinson, T. S. Tan, and F. H. Lee—PATRICK J. FOX, JANGGUEN LEE, AND TONG QIU 416

Closure

Closure to "Discussion of 'A Comparative Study of Suction-Induced Seepage Consolidation Versus Centrifuge Consolidation' by Patrick J. Fox" by R. G. Robinson, T. S. Tan, and F. H. Lee—R. G. ROBINSON, T. S. TAN, AND F. H. LEE 418

No. 5, September

Evaluation of Liquefaction Potential and Dynamic Properties of Silty Sand Using Cyclic Triaxial Testing—T. G. SITHARAM, L. GOVINDARAJU, AND B. R. SRINIVASA MURTHY 423

Horizontal Coefficient of Consolidation of Soft Bangkok Clay—TIAN HO SEAH, BURUT TANGTHANSUP, AND PANA WONGSATIAN 430

Use of EPS Grains to Simulate the Behavior of MSW in Simple Shear—PAOLO SIMONINI AND MATTIA DE RONCH 441

A Cylinder Shear Apparatus—ALAIN CORFDIR, PATRICK LERAT, AND IOANNIS VARDOULAKIS 447

Strain Measurement of Geogrids Using a Video-Extensometer Technique—MASAHIRO SHINODA AND RICHARD J. BATHURST 456

Method to Rapidly Assess the Index Properties of Fine-Grained Dredged Materials—LANDRIS T. LEE, JR. 464

Coefficient of Consolidation and its Correlation with Index Properties of Remolded Soils—A. SRIDHARAN AND H. B. NAGARAJ 469

Effect of Presence of Rigid Base within the Soil on the Dynamic Response of Rigid Surface Foundation—A. MANDAL AND D. K. BAIDYA 475

Triaxial Testing System for Measuring Loading-Rate Effects During Cyclic Tests of Sand—EQRAMUL HOQUE AND FUMIO TATSUOKA 483

Evaluation of the Base Condition of Drilled Shafts by the Impact-Echo Method—KIM DONG SOO AND KIM HYUNG WOO 496

Technical Note

Analysis of Factors Influencing the Shear Deformation of Granular Materials—ABDULLAH ASSAAD AND EYAD MASAD 504

No. 6, November

Design and Construction of Three Instrumented Test Piles to Examine Time Dependent Pile Capacity Gain—SAMUEL G. PAIKOWSKY AND EDWARD L. HAJDUK 515

Using Electrical Conductivity to Estimate Properties of Mineral Slurries Used in Drilled Shaft Construction—TAREK ABICHOU, KAMAL TAWFIQ, AND YASSIR ABDELRAZIG 532

Measurement of Crystalline Swelling in Expansive Clay—WILLIAM J. LIKOS 540

Volumetric Shrinkage Strain Measurements in Expansive Soils Using Digital Imaging Technology—ANAND J. PUPPALA, BALAKRISHNA KATHA, AND LAUREANO R. HOYOS 547

Experimental Bench For Study of Settling-Consolidation Soil Formation—ALAIN ALEXIS, GILBERT LE BRAS, AND PIERRE THOMAS 557

Shear Band Characterization of Triaxial Sand Specimens Using Computed Tomography—SUSAN N. BATISTE, KHALID A. ALSHIBLI, STEIN STURE, AND MARK LANKTON 568

Liquid Limit and Specific Surface of Clay Particles—BOJANA DOLINAR AND LUDVIK TRAUNER 580

Evaluation of Various Downhole Data Reduction Methods for Obtaining Reliable V_S Profiles—DONG-SOO KIM, EUN-SEOK BANG, AND WON-CHUL KIM 585

Testing the Hydromechanical Behavior of a Compacted Swelling Soil—OLIVIER CUISINIER AND FARIMAH MASROURI 598

Direct Simple Shear Testing for Post-Cyclic Degradation in Stiffness of Nonplastic Silt—BYUNG-WOONG SONG, KAZUYA YASUHARA, AND SATOSHI MURAKAMI 607

Technical Note

Determination of the Hydraulic Conductivity Function of a Highly Compressible Material Based on Tests with Saturated Samples—SERGE-ÉTIENNE PARENT, ALEXANDRE CABRAL, EDUARDO DELL'AVANZI, AND JORGE G. ZORNBERG 614

Table of Contents to Volume 27 619

Index to Volume 27 622